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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/922,263	09/02/1997	ROBERT J. CROWLEY	BSME125003	1365
26389 7590 08/09/2007 CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347			EXAMINER SHAY, DAVID M	
			ART UNIT 3735	PAPER NUMBER
			MAIL DATE 08/09/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

08/922,263

Applicant(s)

CROWLEY

Examiner

david shay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on June 19, 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 5, 7, 15, 17, 20-30, 32-44, 47, 48, 52, 53, and 63-65 is/are pending in the application.
- 4a) Of the above claim(s) 20-30, 32-44, 47, 48, 52, 53, 64 and 65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 7, 15, 17, and 63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date March 1 & June 19, 2007.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Applicant argues that the examiner has erred in combining the Sinofsky and Deak references, relying on the Rosen et al reference to provide a showing of motivation. The reason being that, in applicant's view the examiner has overstated teachings of the various references. Applicant's assertion that the examiner has overstated the teachings of Sinofsky is noted. While the examiner acknowledges that this teaching is not contained, *ipsis verbis*, in the Sinofsky reference, it is respectfully noted that the teachings of the applied references are to be evaluated for what they would teach one of ordinary skill in the art, not for merely what is explicitly stated therein. It is clear that the problem sought to be solved by Sinofsky is that certain desirable wavelengths, such as deep UV and mid- and far-infrared are not easily transmitted by available optical fibers. As the solution to this, Sinofsky proposes producing the offending wavelengths at the distal end of the catheter by a variety of means, not limited to crystal lasers (see column 7, lines 14-19), nor is the light generator even limited to a laser (see column 7, lines 38-68). In view of Sinofsky's express statement that "All that is required is that the output wavelength provided by the laser be selected as suitable for the desired treatment procedure..." it is unclear from what teaching applicant deduces that only crystal lasers are indicated by Sinofsky.

Continuing, applicant next asserts that the teachings of Rosen have been overstated. In response to the examiner's statement that Rosen et al teach the desirability of using electrical conductors in the place of optical fibers, applicant responds "Rosen et al never teaches this". The reason for this assertion is not clear to the examiner. Rosen et al clearly state that "Among the problems are the difficulty in matching the characteristics of available lasers with the characteristics of fiber optic cables. In particular, the wavelengths at which fiber optic cables having mechanical properties suitable for use in catheters carry light energy with low losses do

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not necessarily correspond to the wavelengths at which lasers radiate the maximum energy.

Consequently, a substantial amount of light energy produced by a laser may not be transmitted or may be absorbed by the fiber optic cable extending throughout the length of the catheter.

Furthermore, the connectors by which light is coupled from a laser source to the proximal end of the fiber optic cable of the catheter may introduce attenuation. Thus, the exact amount of light energy or power arriving at the distal end of the fiber optic cable extending through the catheter may not be known” (see column 1, line 61 to column 2, line 9). Here Rosen et al clearly teach the limitations of optical fiber transmission of light energy to the distal ends of catheters. The fact that the proposed solution of Rosen et al is to place an electrically driven light (or other energy) generator at the distal end of the catheter would not be lost on one of ordinary skill in the art. It is well understood that “a person of ordinary skill is also a person of ordinary creativity, not an automaton” (see *KSR International Co. v Teleflex Inc.* 82 USPQ2d 1385, 1397 (Supreme Court, 2007)). As such, one of ordinary skill in the art would easily derive the understanding of the relative limitations of optical fibers relative to electrical conductors from the above passage of Rosen et al. Further the assertion that the device of Sinofsky would be rendered unsuitable for its intended purpose by employing an electrically actuated radiation generator is erroneous, as the intended purpose of the Sinofsky device is, in part, to produce “a catheter for insertion in a body passage or cavity and for treatment with radiation in a first wavelength range” (see column 2, line 36-38). It is lastly noted that Deak discuss medical uses for his device in column 11, lines 30-41.

Applicant notes that an Information Disclosure Statement was filed in October of 1997.

The examiner has reviewed the record of the instant application available to him and has found

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no IDS of record for this date. Applicant has provided a copy of the return receipt post card, as evidence of the submission. As this IDS is not available to the examiner, it is respectfully requested that applicant resubmit the IDS, in order that the information thereon be may be considered and made of record.

The drawings are objected to because the figure legends, indicia, and cross-hatching are poor, Figures 3C and 8D are not drawn so as to clearly show all features in the Figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5, 7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinofsky in combination with Rosen et al, Deak and the admitted prior art of employing a filter for reducing exposure to undesirable wavelengths. Sinofsky teaches a light applicator with an internally inserted treatment light source and a method such as claimed except for the use of sonoluminescent light. Rosen et al teach the desirability of employing electrical conductors in the place of optical fibers. Deak teaches a laser wherein the output light is generated by sonoluminescence. It would have been obvious to the artisan of ordinary skill to employ the laser of Deak in the method of Sinofsky, since Sinofsky teaches a variety of laser configurations, and since the laser of Deak only requires a few parts and no optical fibers, since only electrical energy need be transmitted through the catheter, which increases energy transmission and does not require matching transmission wavelengths, as taught by Rosen et al, or alternatively to employ the method of Sinofsky in the method of Deak, since this provides a medical application, and in either case it would have been obvious to the artisan of ordinary skill to employ a focusing lens having a flat surface adjacent the wave matching layer and a concave surface adjacent the acoustic conductive medium, as this is just a matter of choice, since the configuration of Deak is equivalent to that claimed, as they both provide a focused beam, thus this particular configuration is not critical and provides no unexpected result; and further to employ a filter, since this is a notorious device for reducing exposure to undesirable wavelengths, official notice of which has already been taken, thus producing a device such as claimed.

Claims 17 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinofsky in combination with Rosen et al, Deak and the admitted prior art of employing a filter for reducing exposure to undesirable wavelengths, as applied to claims 1, 5, 7, and 15 above, and

further in view of Putterman et al. Putterman et al teach that the generation of x-rays occurs during sonoluminescence and the use of lead zirconium titanate as a transducer material suitable for producing sonoluminescence. It would have been obvious to the artisan of ordinary skill to employ the transducers of Putterman et al, since these are capable of producing sonoluminescence and Deak teaches no particular transducer material, and because the use of lead zirconium titanate is not critical and produces no unexpected result, thus producing a device such as claimed.

Applicant's arguments filed June 19, 2007 have been fully considered but they are not persuasive. The arguments are not persuasive for the reasons set forth above.


**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to david shay whose telephone number is (571) 272-4773. The examiner can normally be reached on Tuesday through Friday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II, can be reached on Monday, Tuesday, Wednesday, Thursday, and Friday. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAVID M. SHAY  
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